



CHARACTERISTIC OF BLOOD DONATION AMONG DONORS AND NON-DONORS IN THE NATIONAL BLOOD TRANSFUSION CENTER

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ABSTRACT

Background: Blood donation is the beginning step for blood transfusion that can save the lives of thousands of people worldwide because blood is an essential element of human life and there are no substitutes for it, especially after an accident or during a medical operation. **Objectives:** to assess the characteristic of blood donation among donors and non-donors in Baghdad. **Methods:** A case control study was conducted in the in the National Blood Transfusion Center, because It is the only center of blood donation in Iraq, located in Al – Rusafa district of Baghdad city near the Ministry of Health in Bab-al– Moadham & Primary and Secondary Schools in Palestine Street. The

data collected from the 1st of October 2017 to the 1st August 2018. The sample is a convenient one taken by pooling all the blood donors attending the center during a specified period. Total of 1038 individuals were interviewed, 538 were donors ‘attendants to the National Blood Transfusion center, and 500 were non-donors who were teachers of some primary and secondary schools in Palestine Street. **Results:** The highest percentage of donor (38.66 %) in the age groups (30-39) and (51.00%) among non-donor in age groups (20-29). the highest percentage of donor was males (84.76%), while in the non –donor was female (60.60%) As well, (98.14%) of donors and (96.80%) of non-donors from urban area (46.1%, 49.4%) of donor and non-donor had an institute level of education. **Conclusions:** there is a statistically significant relationship between the age, education, gender, occupation, marital status and donors at p. value less than 0.05. and to achieve high voluntary blood donation rates there is an urgent need to educate people on blood donation and convince them that it is a noble practice.

KEYWORDS: Donation, Case, Blood, Assess, Transfusion.

INTRODUCTION

Blood transfusion is the process of receiving blood products & used in a variety of medical conditions to replace lost components of the blood.^[1] Blood donation is the beginning step for blood transfusion that can save the lives of thousands of people worldwide because blood is an essential element of human life and there are no substitutes for it, especially after an accident or during a medical operation.^[2,3]

There are several types of blood donation: whole blood, platelets, plasma and red cells. To be eligible to donate whole blood, platelets or plasma, person must be: in good health, at least 18 years old, at least 110 pounds and able to pass the physical and health history assessment.^[1] Blood donation is harmless & a duty of every healthy member of the community will be taken from a donor not more than 20 minutes time including time for rest and refreshment.^[4]

In the United States, four and a half million of deaths were avoided due to this act.^[5] WHO advocates that 3-5% of the population should donate blood every year, which would be the ideal rate for maintaining a country's stock of blood and blood products at acceptable level.^[6] In Canada more than 1.5 million pints of blood are collected each year. Among them about 65% is from replacement donors, 25% from volunteer donors and about 10% from professional donors.^[7]

About 83% of the global population who are living in developing countries have access to only 40% of blood supplied, and this blood in 60% of cases is collected from paid or replacement blood donors rather than from voluntary non-remunerated low risk donors.^[8] Unfortunately, worldwide, there is a shortage of active blood donors to meet the increased demand for blood, of the estimated 80 million units of blood which are donated annually worldwide, only 38% are collected in the developing world where 82% of the world's population lives.^[9]

Moreover, the present study may help to remove the concept of misunderstanding about current issues regarding blood donation and transfusion and may also facilitate to develop promotional and educational approaches to enhance blood donors' participation. Ignorance, fear and misconceptions about blood donations and lack of voluntary blood donation organizations are major constraints in many developing countries to facilitate voluntary blood donation. More awareness must be created among all strata of population especially among youngsters on importance of blood donation. Donating blood is an act that can save the lives

of thousands of people worldwide The aimed to assess the characteristic of blood donation among donors and non-donors in Baghdad.

SUBJECTS AND METHODS

A case control study was conducted in the in the National Blood Transfusion Center, because It is the only center of blood donation in Iraq, located in Al –Rusafa district of Baghdad city near the Ministry of Health in Bab-al– Moadham & Primary and Secondary Schools in Palestine Street. The ethical clearance was obtained from Ministry of Health and from each participant before starting to collect the data. The data collected from the 1st of October 2017 to the 1st August 2018. The sample is a convenient one taken by pooling all the blood donors attending the center during a specified period. Total of 1038 individuals were interviewed, 538 were donors ‘attendants to the National Blood Transfusion center, and 500 were non-donors who were teachers of some primary and secondary schools in Palestine Street. The data analyzed by using the SPSS version 20 and the p. value set at <0.05.

RESULTS

The highest percentage of donor (38.66 %) in the age groups (30-39) compared to (51.00%) of non-donor in age groups (20-29), while the lowest percentage in donor& in non – donor (5.20%) & (2.40%) respectively in the age groups (50-59) [Table 1]. Regarding gender distribution, the highest percentage of donor was males (84.76%), while the highest percentage of non –donor was female (60.60%). majority of the studied sample (98.14%) of donors and (96.80%) of non-donors from urban area. It is found that the highest percentage of donors were workers (83.27%), while in non-donors the highest percentage (71.40%) were non-workers. Also, it was found that the highest percentages of donors (78.25%) and non -donors (59.6%) were married [table1]. The highest percentage of donors & non – donors were in the level of Institute& More (46.1%, 49.4%) respectively [table 2].

Table 1: The distribution of studied sample among blood donation according to characteristic of variables.

Age Groups	Case (538)		Control (500)		p. value
	No.	%	No.	%	
20-29	189	35.13	255	51.00	<0.00001
30-39	208	38.66	167	33.40	
40-49	113	21.00	66	13.20	
50-59	28	5.20	12	2.40	
Gender					
Males	456	84.76	197	39.40	<0.00001
Females	82	15.24	303	60.60	
Residence					
Urban	528	98.14	484	96.80	0.167
Rural	10	1.86	16	3.20	
Occupation					
Worker	448	83.27	143	28.60	<0.00001
non-worker	90	16.73	357	71.40	
Total	538	100.00	500	100.00	
Marital status					
Un married	117	21.75	202	40.40	<0.00001
Married	421	78.25	298	59.6	

Table 2: The distribution of studied sample among blood donation according to level of education.

Level of education	Case		Control		p. value
	No	%	No	%	
Primary	101	18.77	162	32.40	<0.00001
Intermediate	106	19.70	40	8.00	
Secondary	83	15.43	51	10.20	
Institute & More	248	46.09	247	49.40	
Total	538	100.00	500	100.00	

DISCUSSION

Despite the rapid development, a true substitute for blood will not be available for many years. The only source of blood is blood donation and maintaining an adequate blood supply is an issue of concern to health planners especially with the increase in demand. Therefore, understanding the beliefs, attitudes and level of knowledge associated with blood safety and donation is important. The age distribution in this study revealed that (38.66%) of the respondents of donors were between 30-39 years of age & non – donors (51.00%) were in age groups (20-29), While in a study done by Majeed, 2006 in Iraq, who found that most of the sample donors & non donors (65.2%) are between 18-30 years of age.^[10] This may be due to the altruism, religious factor more awareness in this age group, while in non- donors were

students, and attendants to the primary health care centers, were mostly young adults. This study showed donation of blood was higher among males (84.76%) than females; the same findings were observed by Majeed, 2006 in Iraq,^[10] Muhammad *et al.*, 2010 in Pakistan,^[11] Al-Drees, 2008 in KSA,^[12] Shahshahan, 2005 in Iran.^[13] Women generally tend to donate blood less than men, Factors like anemia, prevalent customs, beliefs and lifestyle, multiple pregnancies, etc. are some of the reasons for low donations by women in Asian developing countries.^[14,15] Trend of blood donation among women of all over the world, not only in developed countries but also in developing countries is equally less.^[16] Majority of the studied sample were from urban areas. This differs from study conducted by Muhammed *et al.* 2010 in Pakistan who found that more than 60% of donors from rural areas.^[11] These differences may be due to that in urban areas the people have more intentions to donate blood and because the center in some urban areas. It is worth mentioning that more than 60% of individuals included in the study were married. This agrees with results of study done by Majeed, 2006 in Iraq.^[10] and Shahshahan, 2005 in Iran.^[13] In this study, almost all individuals were from various levels of education. Our findings are also supported by other studies conducted by Majeed, 2006 in Iraq,^[10] and in parts of the world Alam, Khadeer 2004 in Iran.^[17]

CONCLUSIONS

There is a statistically significant relationship between the age, education, gender, occupation, marital status and donors at *p*. value less than 0.05. and to achieve high voluntary blood donation rates there is an urgent need to educate people on blood donation and convince them that it is a noble practice. And get rid of their fears from this practice and know all the needed measures and details related to it.

CONFLICT OF INTEREST: None.

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